

Claims

1. ~~Multiband antenna array for mobile radio equipment, comprising:~~
~~- a planar patch antenna (1) that has at least two resonances (1.1 and 1.2) and is provided with a connection to ground (1.M) and a high-frequency interface (1.RF), and~~
~~- at least two parasitic transmitters (2.1, 2.1' and 2.2) which are located marginal to the planar patch antenna (1) and are each embodied so as to be free of a high-frequency interface.~~

2. Multiband antenna array according to the preceding claim 1, characterized in that
at least one parasitic transmitter (2.1 or 2.2) is provided with a connection to ground (2.1.M or 2.2.M).

3. Multiband antenna array according to any one of the preceding claims 1 and 2, characterized in that
the two parasitic transmitters (2.1 and 2.2) are provided with a shared connection to ground (2.12M).

4. Multiband antenna array according to any one of the preceding claims 1 to 3, characterized in that
at least one parasitic transmitter (2.1') is free of connections to ground.

5. Multiband antenna array according to any one of the preceding claims 1-4, characterized in that
the two parasitic transmitters are located on two opposite sides of the planar patch antenna (1).

Replaced by Article 19

6. Multiband antenna array according to any one of the preceding claims 1 to 4, characterized in that the two parasitic transmitters are located on two adjacent sides of the planar patch antenna (1).

7. Multiband antenna array according to any one of the preceding claims 1 to 6, characterized in that at least one parasitic transmitter extends at least partially over two adjacent sides of the planar patch antenna (1).

8. Multiband antenna array according to any one of the preceding claims 1 to 7, characterized in that at least one parasitic transmitter extends at least partially over three adjacent sides of the planar patch antenna (1).

9. Multiband antenna array according to any one of the preceding claims 1 to 8, characterized in that at least one parasitic transmitter extends at least partially over four sides of the planar patch antenna (1).

10. Multiband antenna array according to any one of the preceding claims 1 to 9, characterized in that the planar patch antenna (1) and the parasitic transmitters are arranged in a plane.

11. Multiband antenna array according to any one of the preceding claims 1 to 9,

characterized in that
at least one parasitic transmitter has a spatial extension,
preferably emerging perpendicularly out of the plane of the
planar patch antenna (1).

Amended Claims

[received by the International Office on 6 April 2004
(06.04.2004); original Claim 1 amended
(1 page)]

New claim 1

1. Multiband antenna array for mobile radio equipment,
comprising:
 - a planar patch antenna (1) that has at least two
resonances (1.1 and 1.2) and is provided with a connection
to ground (1.M) and a high-frequency interface (1.RF), and
 - at least two parasitic transmitters (2.1, 2.1' and 2.2)
which are located marginal to the planar patch antenna (1)
and are each embodied so as to be free of a high-frequency
interface,characterized in that
the parasitic transmitters (2.1, 2.1' and 2.2) are embodied
as line-type conductor structures, whereas the structures
of the planar patch antenna (1) are embodied as sheet-type
conductor structures.